MYRIOPHYLLUM FARWELLII (HALORAGACEAE) IN BRITISH COLUMBIA

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Myriophyllum farwellii Morong. differs from all the other species of *Myriophyllum* growing (or suspected of growing) in the Pacific Northwest by its flowers in the axils of ordinary submersed leaves and in its leaves partly whorled and partly alternate. Recently (1971-1973), it has been found by us in three lakes (Echo, Mohun and Brewster) of the Campbell River area on Vancouver Island.

In these lakes it grows in the sublittoral zone, 30-120 cm below summer water level, rooted in detritic gyttja, and it is usually associated with *Scirpus subterminalis* Torr. in shallows and *Potamogeton natans* L. in deeper water. Using the Braun-Blanquet scale to indicate quantity, the two following relevés from Mohun Lake are examples of typical stands containing *M. farwellii.*

1. Depth 50 cm: *M. farwellii* 5, *Scirpus subterminalis* 2, *Potamogeton gramineus* L. +, *Utricularia vulgaris* L. +, *Nuphar polysepalum* Eng. +.

2. Depth 120 cm: *M. farwellii* 5, *Utricularia vulgaris* +, *Potamogeton natans* +.

The previously reported distribution of *Myriophyllum farwellii* was centered around the Great Lakes. In Canada *M. farwellii* occurs from Nova Scotia and New Brunswick to Ontario (Boivin, 1966), and in the United States from central New York to northern Minnesota (Muenscher, 1944; Fernald, 1950; Gleason, 1952; Fassett, 1957). Although introduction is possible, it is difficult to decide whether or not the occurrence of *M. farwellii* in British Columbia is indigenous. The distribution of vascular plants in the Pacific Northwest is not sufficiently well known and aquatic species are usually even less thoroughly collected. *Utricularia gibba* L. is an example. It was not reported from the Pacific Northwest until recently (Ceska & Bell,

1973; Hitchcock & Cronquist, 1973), although it was collected in Washington by Piper in 1897 (and misidentified as *U. minor* L.). *Sparganium fluctuans* (Morong.) Robins. was collected in British Columbia by Eastham in 1938 and has rarely been collected since. This species (with a distribution similar to that of *Myriophyllum farwellii*) has been recently collected by us in several lakes in the Campbell River area of Vancouver Island.

It is possible that *Myriophyllum farwellii* belongs to that large group of species whose distribution is disjunct due to the Continental Divide and due to the exclusion of those species from the Great Plains. Fernald (1932) discussed this problem in connection with the distribution of some species of *Potamogeton* and gave an extensive list of species with a similar distribution. Several more species (e.g., *Carex lasiocarpa* Ehrh., *Scheuchzeria palustris* L., *Brasenia schreberi* Gmel., etc.; cf. Hultén, 1964, 1971) should be added to this list.

The origin of this distributional pattern is connected with the Pleistocene history of North America (Deevey, 1949; Major & Bamberg, 1967), and the pattern is particularly pronounced in aquatic plants. Whether *Myriophyllum farwellii* really belongs to this group or whether it was introduced cannot be answered at this time.

List of localities of *Myriophyllum farwellii* and specimens collected:

1. Echo Lake (49° 59′ N., 125° 25′ W.), SW end of the lake. Collected by P. D. Warrington, September 1971; A. & O. Ceska, July 1973.
2. Mohun Lake (50° 05.3′ N., 125° 31.5′ W.), W end of the lake. Collected by O. & A. Ceska, July 1972 (*), July 1973.
3. Brewster Lake (50° 04.5′ N., 125° 35.2′ W.), S end of the lake. Collected by O. Ceska, July 1973.

Specimens are deposited in the Herbarium of the University of Victoria (UVIC), collection marked by (*) was distributed to the following herbaria: CAN, DAO, UBC, UC, and V.

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